WHAT WE CLAIM AS OUR INVENTION IS:

1. A method for the expression of a thioredoxin or thioredoxin reductase by a host cell said method comprising:

a) introducing into a plant, bacterial or yeast host cell a chimeric nucleic acid sequence comprising:

1) a first nucleic acid sequence capable of regulating the transcription in said host cell of

2) a second nucleic acid sequence, wherein said second sequence encodes a fusion polypeptide and comprises (i) a nucleic acid sequence encoding a sufficient portion of an oleosin gene to provide targeting of the fusion polypeptide to a lipid phase linked in reading frame to (ii) a nucleic acid sequence encoding a thioredoxin or thioredoxin reductase; and

3) a third nucleic acid sequence encoding a termination region functional in the host cell; and

b) growing said host cell to produce the fusion polypeptide.

2. The method according to claim 1 further including separating the recombinant fusion polypeptide from cellular host cell components by selective partitioning into a lipid phase.

3. The method according to claim 2 wherein said selective partitioning comprises centrifugation, floatation or size exclusion.

4. The method according to claim 1 further including separating the recombinant fusion polypeptide from cellular host components by selective partitioning into a lipid phase comprising oil bodies.

5. The method according to claim 4 wherein said recombinant fusion polypeptide is separated by addition of oil body components and reconstitution of the oil bodies.

6. The method according to claim 2 further comprising releasing the heterologous polypeptide from the fusion polypeptide associated with the lipid phase, said method comprising:

c) including in said second DNA sequence (2) between said DNA sequence (i) encoding the oil body protein and the DNA sequence (ii) encoding the thioredoxin or thioredoxin reductase, a linker DNA sequence (iii) encoding an amino acid sequence that is specifically cleavable by enzymatic or chemical means; and

d) contacting the lipid phase with said enzymatic or chemical means such that said thioredoxin or thioredoxin reductase is released from the fusion polypeptide.

7. The method according to claim 6 wherein said linker DNA sequence encodes an amino acid sequence that is recognizable by the proteolytic action of an enzyme selected from the group consisting of thrombin, factor Xa, collagenase, chymosin, clostrapain and viral protease.

8. The method according to claim 6 wherein said enzymatic means comprises an enzyme that is immobilized.

9. The method according to claim 8 wherein said enzyme is immobilized by attachment to an oleosin that is associated with an oil body.

10. The method according to claim 1 wherein said plant host cell is obtainable from a dicotyledonous plant.

11. The method according to claim 1 wherein said plant cell is obtainable from a monocotelydenous plant.

12. The method according to claim 1 wherein said plant cell is obtainable from the species *Carthamus tinctorius* (safflower).

13. A chimeric nucleic acid sequence, capable of being expressed in association with an oil body of a host cell comprising:

1) a first nucleic acid sequence capable of regulating the transcription in said host cell of

2) a second DNA sequence, wherein said second sequence encodes a fusion polypeptide and comprises (i) a nucleic sequence encoding a sufficient portion of an oleosin gene to provide targeting of the fusion polypeptide to a lipid phase linked in reading frame to (ii) a nucleic sequence encoding a thioredoxin or thioredoxin reductase; and

3) a third nucleic acid sequence encoding a termination region functional in the host cell.

14. The chimeric nucleic acid sequence according to claim 13 further including (iii) a linker nucleic acid sequence encoding an amino acid sequence that is specifically cleavable by enzymatic means wherein said linker nucleic acid sequence (iii) is located between said (i) nucleic acid sequence encoding the oil body protein and said (ii) nucleic acid sequence encoding the thioredoxin or thioredoxin reductase.

15. The chimeric nucleic acid according to claim 14 wherein said nucleic acid linker sequence (iii) encodes a cleavage site for an enzyme selected from the group consisting of thrombin, factor Xa, collagenase chymosin and viral protease.

16. An expression cassette comprising a chimeric nucleic acid sequence according to claim 13.

17. A plant transformed with a chimeric nucleic acid sequence according to claim 13.

18. A plant according to claim 17 wherein said plant is *Carthamus tinctorius* (safflower).

19. A plant cell culture containing a chimeric nucleic acid sequence according to claim 13.

20. A plant seed containing a chimeric nucleic acid sequence according to claim 13.

21. A plant seed according to claim 20 wherein said plant seed is *Carthamus tinctorius* (safflower) plant seed.